Material and methods. Since the implementation of the technique of radiosurgery in the Carlos Haya Hospital in Malaga in 2010, 9 patients were treated with brain gliomas with Brainlab radiosurgery system. The prescribed dose ranged from 16 to 22 Gy, depending on the size of the treated lesion in each case and the dose of radiation that had previously received.
Results. Of the 9 patients, 5 were men and 4 women. The most common first symptom was seizures in 5 patients. The distribution of patients according to histology was as follows: 5 glioblastoma multiforme, 2 oligodendrogliomas, 1 ependymoma and 1 astrocytoma grade II.
Conclusions. Tolerance of radiosurgery in these patients has been good and the treatment in the absence of increased monitoring, appears to increase local control of the disease.

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Radiosurgery with circular collimators for intracranial meningioma

J. Jimenez Calero[1], L. Oton Sanchez[1], V. Garcia Marin[2], C. Dolado Correa[1], M. Peña Perea[1], P. Valle Martin[1]
[1] *Hospital Universitario de Canarias, Oncología Radioterápica, Spain*
[2] *Hospital Universitario de Canarias, Servicio de Neurocirugía, Spain*

Introduction. Radiosurgery was established in the last decades as a non-invasive and highly effective treatment for intracranial meningiomas. From 1998 to 2010, this technique has been performed in Hospital Universitario de Canarias with circular collimators, so an interesting temporal mark is available to retrospectively analyze a population treated with a nowadays unused technique. Objective Retrospective study on circular collimator radiosurgery treated intracranial meningiomas.
Method. From 1998 to 2010, 81 patients, 59 women and 22 men, with 90 meningiomas were treated. Mean age 57 years (21–86); 17 had been surgically treated. Median follow-up 5 years. Mean meningiomas volume 1.19 cc (0.04–5.99).
Location. Convexity 18%, tentorium cerebelli 15%, cavernous sinus 15%, petrosphenoclival 13%, sphenopalatine angle 9%, parasagittal 9%, others 21%. Radiosurgery was performed with a Lineal Accelerator Saturn 43 with 6 MeV photons and 3DLine System using circular collimators.
Results. There were four deaths related to meningioma progression, all of them before two years post-treatment. Eleven deaths were attributed to intercurrent diseases. At diagnosis, 41 patients were symptomatic; 16 solved symptoms during the first year, eight in the second and five later. Radiologically, 32 lesions decreased, 49 stayed unchanged and nine progressed. Two cases of the last ones required surgical rescue. Two patients experienced some minor side effects during the procedure. Late complications were limited to one case of the followings: radionecrosis, partial seizures, acoustic-vestibular syndrome, stroke and Bell Paralysis with oedema, all of them solved without after-effects.
Conclusion. Radiosurgery results an effective and low-morbid treatment for intracranial meningiomas, as single treatment or combined with surgery. Circular collimators gave technical means to reach good clinical results.

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Robotic image-guided hypofractionated radiosurgery (cyberknife) in perioptic meningiomas

S. Sánchez Luis, R. García García, I. Santa-olalla, A. Floriano, L. Lorenzana, K. Sallabanda, J. Samblás
San Francisco De Asis Radiosurgery – Grupo IMO, Radiotherapy and Robotic Image-guided, Spain

Objectives. Analyze the feasibility and safety of treatment using robotic image-guided hypofractionated radiosurgery for meningiomas close to the optic tract and acute toxicity related to it.
Methods. 12 patients with meningiomas located at ≤2 mm from the optical path were treated in our unit from April-2011 to July 2012. The median age was 56 years (range 40–77 years). The prescribed dose ranged from 2100 to 2500 cGy in 3–5 consecutive fractions. The max dose to chiasm and/or optic nerve was limited to ≤2300 cGy. Previous to treatment, 11 of 12 patients had mild visual field defects, one patient had no visual impairment.
Results. The median volume of the treated lesions was 11.07 cm^3 (range 0.38–36.92 cm^3). The median rates of conformity index were 1.25 (range 1.15–1.18). The median prescription isodose was 84% (range 79–91%). The median maximum dose to chiasm was 2214 cGy (range 780–2384 cGy) and to optic nerve nearest 1949 cGy (range 769–2562 cGy). 100% of patients had stable radiological meningioma on MRI on their follow up, and no one had associated edema. No patient had acute toxicity on the visual pathway and 3 of 12 patients referred visual improvement.
Conclusions. Treatment of meningiomas adjacent to the optic pathway with robotic image-guided hypofractionated radiosurgery can be a safe and a feasible option for treatment without long-term monitoring periods. Despite the complex localization of these lesions, hypofractionated radiosurgery using 3–5 fractions is presented as a viable alternative to conventional treatment. In our series, no patient had worsening of vision acuity or toxicity related to the treatment. Long-term monitoring is needed to assess the local control of the lesion and the absence of chronic toxicity.

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